1.   (THREE TIMES AMENDED) A data controller of a peripheral device having a storage medium, the data controller comprising:

a transfer extend generator that generates transfer extend entries for a data transfer between the storage medium and a host computer, each of said transfer extend entries comprising a pointer to a next transfer extend entry; and

at least one retrieval channel coupled to receive the transfer extend entries for programming the data transfer.

2.   (TWICE AMENDED) A data controller of a peripheral device having a storage medium and a processor, wherein the data controller minimizes interrupts to the processor by re-ordering a plurality of commands received from a host computer from an order of arrival into an order of sequence in the storage medium.

3.   (TWICE AMENDED) A data controller, that is couplable to a host and coupled to a storage medium, microprocessor, local storage and a buffer memory, comprising a command queuing engine that creates a plurality of threads of sequential commands simultaneously while minimizing interrupts associated to the commands.

5. The data controller of claim 1 comprises a data retrieval channel and a status retrieval channel.

6. The data controller of claim 1 wherein the transfer extend generator stores the transfer extend entries and the at least one retrieval channel retrieves the transfer extend entries and programs a corresponding data transfer.

7. The data controller of claim 1 wherein the at least one retrieval channel also programs a status context.

8. The data controller of claim 5 wherein the data retrieval channel programs a data context and the status retrieval channel programs a status context.

9. (AMENDED) The data controller of claim 8, wherein the status retrieval channel monitors a data transfer between a buffer memory in the peripheral device and the storage medium.

10. The data controller of claim 1 wherein the data controller is coupled to a first storage device that stores the transfer extend entries.

11. (AMENDED) The data controller of claim 10, wherein the at least one retrieval channel provides used read pointers to the first storage device for reuse.

12. (TWICE AMENDED) The data controller of claim 2, further comprising a command queueing engine configured to arrange the plurality of commands into at least one thread.

13. (AMENDED) The data controller of claim 12, wherein the command queueing engine comprises:

a transfer extend generator configured to generate transfer extend entries for a data transfer between the storage medium and a host computer; and

a data retrieval channel coupled to receive the transfer extend entries for programming the data transfer.

14. (AMENDED) The data controller of claim 13, wherein the command queueing engine further comprises a status retrieval channel.

15. (AMENDED) The data controller of claim 14, wherein each of the retrieval channels are coupled to receive transfer extend entries and to provide used read pointers to a first storage device of the peripheral device.

16.   The data controller of claim 3 wherein the command queueing engine includes a transfer extend generator that generates transfer extend entries.

17.   The data controller of claim 16 wherein the transfer extend generator is coupled to the buffer memory to store the transfer extend entries.

18.   The data controller of claim 3 wherein the command queuing engine includes a data retrieval channel.

19.   The data controller of claim 18 wherein the command queueing engine further includes a status retrieval channel.

20.   The data controller of claim 18 wherein the data retrieval channel is coupled to the buffer memory to retrieve transfer extend entries and to return used read pointers.